JING-PO LI, Ph.D., NEW YORK UNIVERSITY SCHOOL OF MEDICINE $34,996

Study of a Novel Protein Kinase Involved in the Mitogenic Activation of the Erythropoietin Receptor

Using an animal model (mouse) in the laboratory, we plan to study how the leukemia is induced by a virus, the Friend SFFV. The process of the disease induction resembles the initiation of human leukemia, in that the affected cells lose control of normal growth, and they divide at a dramatically increased rate, which eventually leads to leukemia. We recently discovered that an enzyme, called p85 kinase, may be a key element in the cellular machinery that is activated during the pre-leukemic cell growth. We propose to further study this enzyme, and the results from the proposed study may help us to understand how a normal cell becomes a leukemia cell.

DAVID JAMES McCONKEY, Ph.D., UNIVERSITY OF TEXAS, M. D. ANDERSON CANCER CENTER $28,800

Endogenous Endonuclease Activation in Chronic Lymphocytic Leukemia (CLL)

Chronic lymphocytic leukemia (CLL) is a fatal disease that typically affects older individuals. Although dramatic improvements have been made in the treatment of childhood leukemias and lymphomas over the last two decades, little progress has been made with CLL and other late-onset diseases, indicating that new therapeutic regimens are required. It has been suggested recently that activation of a "suicide" mechanism, known as apoptosis or programmed cell death, may be responsible for the elimination of cancer cells in response to successful chemotherapy, and that defects in the program may be responsible for resistance to treatment. We plan to investigate whether CLL cells from patients with progressive disease programmed differently from those taken from patients who respond to treatment by investigating an important mechanism involved in the suicide response. Ultimately, we hope to be able to use this information in the clinic here at M. D. Anderson Cancer Center to transform chemotherapy-resistant CLL cells into sensitive ones, leading to the design of more effective treatment protocols in the future.

Source: https://www.industrydocuments.ucsf.edu/docs/xhdb0000